



## COST-BENEFIT ANALYSIS ON IMPLEMENTATION OF GREEN BANKING TECHNIQUES IN INDIAN BANKING INDUSTRY

(w.r.t.ATM's)

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### ABSTRACT:

*This paper investigates the significance of Green Banking and soughts the Cost-Benefit Analysis of implementing Green Banking Techniques in Indian Banking Industry. Green banking is a stream of banking in which environmentalism is adopted as the operational base of banking activities. Green banking avoids as much paperwork as possible and promotes the transactions with the effective usage of modern technology. Banking, being a key Industry in the service sector has largest bank network spread over a vast area. In this competitive environment, to reach its goals banks has to evaluate their cost structure. Therefore, one of the problems emerging in the changing banking scenario is, whether the huge investments made in providing Green banking services are justifiable with the benefits or Returns earned with Green banking services. The study is proposed to be conducted with two objectives: 1) To establish the Costs and Risks of implementing Green Banking Techniques w.r.t. ATM's 2) To establish the Benefits of implementing Green Banking Techniques and provide possible recommendations for further improvement. To achieve the above stated objectives, the data for the study is proposed to be collected through secondary sources.*

**Keywords:** *Green Banking, Cost-Benefit Analysis, ATM's Indian Banking Industry, Techniques,*

### Introduction to the Study

During the past decade, There have been continuous endeavors across the world to measure and mitigate the risk of climate change caused by human activities Banks are regarded as environment favorable and do not effect the environment much throughout their own internal operations, the external impression on the environment all over their customers activities.

Green Banking is not a separate bank. It implies guaranteeing environment friendly practices in banking sector and thereby decrease internal and external carbon footprints. Banking industry is generally not regarded as polluting industry. But it influence the environment in terms of expanding energy consumption (lighting, air conditioning), paper consumption. An extensive view of this is that banking industry is related to the external environment as it dispense funds to others and hence finances their undertakings. Banks are a source of funds. So they can supply to environment by ensuring environmentally accountable investment and a carefully assess lending. It therefore covers two aspects. The first one being careful use of all resources, energy and bring down carbon footprints and next being supportive and financing only environment friendly investment.

Green Banking is defined as encouraging eco-friendly banking operations and decreasing emitted carbon mark from banking undertakings. They mainly focuses on two prolonged



approaches. Initially, it puts stress on green revolution of internal functioning of all banks, meaning all banks should adopt correct ways of observing renewable energy, digitalization and other estimate to minimize carbon mark from banking sectors. Secondly, all banks should accommodate financing in an environment-friendly way.

It aims to run bank-friendly operations through reducing paper usage, electricity efficiency, environmentally friendly offices and others.

The benefit of executing Green Banking in environmental productivity is that banks are more interested with the environment and can raise banks earnings by lower down operational costs spent without decreasing the quality of banking products and services.

Cost-Benefits Analysis (CBA) was defined by Dreze, J., & Stern, N. (1987) as the examination of a decision in terms of its significance or costs and benefits. They added that the objective of conducting a cost-benefit analysis for an undertaking is to provide a steady process for judging a decision in terms of their consequence. CBA provides a systemic approach to resolve the positives and negatives of various Green Banking services.

The current study is concerned with Cost-Benefit Analysis On Implementation Of Green Banking Techniques In Indian Banking Industry (w.r.t.ATM's)

## **Methods of Green Banking**

- Internet banking or online banking.
- Tele banking.
- Mobile banking.
- Electronic mail.
- ATM
- Electronic fund Transfer.
- Automated clearing house.
- Magnetic Ink character Recognition (MICR)
- Real Time gross settlement (RTGS)

## **Research Questions**

- What is the average cost per day per ATM machine from different dimensions like Volume, Module and Network levels?
- To what extent the level of cost per user and cost per transaction are varied between ATM usage and Traditional banking services.



- What are the relevant costs associated with Traditional and Green Banking Services.

Whether the Green Banking Services are cost effective in comparison to Traditional Banking Services

### **Scope of the Study**

The scope of the study is exclusively limited to the Cost Benefit Analysis on implementation of Green Banking Services in Indian Banking Industry. The study involves the transaction cost analysis of ATM's with traditional banking services.

### **Objectives of the Study**

- To establish relationship between Green Banking Techniques and Banks Operational Cost.
- To assess the Operational cost of ATM's
- To determine the funds generated through ATM's
- To make a comparative analysis on the transaction cost of ATM's with traditional Banking Service.

### **Research Methodology**

The research work proposed to be undertaken will be of Descriptive and Experimental in nature. Since the analysis for the study is proposed to be undertaken by comparing the transaction costs of various Green Banking channels (ATM's) at the first time, it is opinioned as experimental.

### **Literature Review**

Existing literature indicates that technology-based products give opportunities to have significant cost advantages, increasing profitability and facilitate lower risk than traditional banking pr

Relatedly, DeYoung, (2001) disagreed that digital banking has a powerful indirect impact on profitability along cost reduction. Internet banking and other electronic banking resources lower down average operational costs on banks bearing physical overhead expenses. It indicates that as IT infrastructure grows, the average cost per transaction falls thus leading to increased profitability.

Additionally, there is a sense of correlation between internet banking and operational risks. The likely hood of banks to the internet banking has few basic factors such as cost benefits, high prosperity and low threat. (Haider, Sana & Manzoor, Mohammad & Sumra, Hassan & Abbas, Momina, 2011)

According to a 2012 related study on influence of internet banking on commercial bank execution in Malawi, the higher use of Internet banking had brought further risk elements to complete risk summary of the banks (Dalitso, 2012). The study also exposed that Malawian banks that had embraced internet banking had not completely understand the expected

efficiencies and well being due to the fact that support for digital platforms was still less and yet increased usage was key to improve the banks profits from this new value scheme.

## DATA ANALYSIS AND DISCUSSION

### Cost Estimates of Operating ATMs by stakeholders

#### **A. (i) PSBs (Other than SBI) – Cost Estimates of Expenses per Month per ATM**

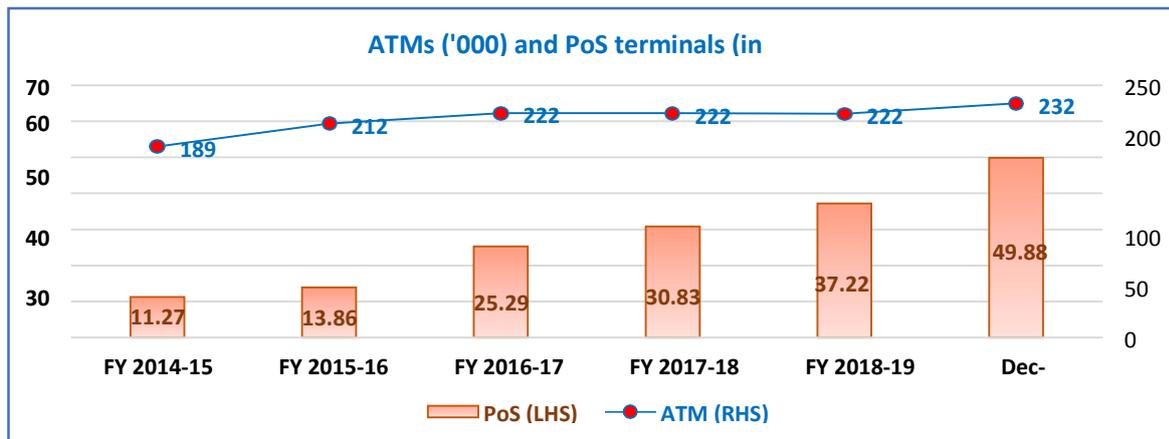
Particulars	Amount (Rs.)
Rentals	5,600 to 15,700
Cost for Care Takers(2-3 shift)	36,023 to 37,250
Others including AC/Power/Ceaning etc	7,700
Any other recurring expenses per ATM per month:	15,850
Cost for cash management per ATM per month.	13,700
Any other yearly expenses per ATM(Depreciation)	12,527
Total Monthly expenditure	83,700 to 95,027
New Expenditure for ATM compliance (EMV,ASD,TSS etc)	80,000 to 1,00,000
Cash Management guided compliance cost	4000-5000 pm
Increase in monthly ATM expenditure by 10-15% due above compliance.	

Source: <https://m.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=1000>

#### **B. Private Banks – Cost Estimates of Expenses per Month per ATM**

Particulars	Amount (Rs.)
Site rentals	20,000
Cash in Transit(CRA cost)	10,500
Electricity	7,200
HouseKeeping and other cost	3,500
FLM/SLM/Ins of Assets/AMC of ATMs/EJ pulling	6,000
Cash management & forecasting/chargeback loss	1,000
Depreciation on assets	12,500
Cost of Fund (capex)	5,500
Sub-total cost per ATM(a)	66,200
Security cost	16,000
E-surveillance	7,000
Sub-total(b)	23,000
Cost of fund(Cash at ATM,s) (c)	8,500
IT related cost	5,000
Amortization of EMV License fee, HDE, Anti Skimming etc.	3,500
AMC	500
Sub -Total(d)	9,000
TOTAL Cost of Operating ATM (a+b+c+d)	1,06,700
Additional cost for complying with Cassette Swap requirement	
Additional cost of cash post Cassette swap-Due to increase cash in transit	8,500
Implementing cassette swap	8,000
Cash management activity	4,000
TOTAL	20,500

Source: <https://m.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=1000>



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### Findings

- Number of ATMs in the country during the preceding 3 years is almost stagnant as operating ATMs have become unviable for banks.
- The cost of handling ATM's have grown significantly during the last one and half year due to major funds in building EMV, Enhancing OS software, anti-skimming devices, etc.
- Upper cap of ₹ 20/- that bank can charge for ATM cash withdrawal has not been weighed up for over a decade i.e. since March 2008.
- Number of free transactions permitted were also viewed last in August 2014 i.e. about 5 years back and have not gone through any change.
- The cost of working ATMs of PSB's is relatively less than cost of working of Private Bank ATM's.

### Suggestions

- Banks can also look at converting their ATMs to Cash Recyclers OR deploy more no. of cash recyclers in locations where cash deposits and cash withdrawals both are equally required and enable Interoperable Cash Deposits (ICD) transactions.
- Optimizing the monthly electricity bills by switching over to LED lights and timer-controlled lighting in the ATMs. Necessity of air-conditioner at each ATM location can also be rethought, as the same may not be compulsorily needed for the operating of the ATMs.
- Compatability can be switched from VSAT technology to 4G Modems / CDMA, etc. to lessen cost of upholding and carry better availability.
- Power (including power sockets) and Telecommunication (Network) cabling hold data or supporting ATM services must be secluded from interception or damage. It should be confined from unlawful contact and wire-tapping.
- Physical security guard, wherever not compulsory, can be restored with e-surveillance scheme, this can bring cost competence in operating the ATMs.

- Monitoring ATM wise client complaints, transaction breakdown and suspect dealings at the ATMs shall help in attracting precautionary actions for dropping client complaints and cash shortages.
- Unsuccessful transactions recognized during settlement must be proactively reversed to clients account with no waiting for client's complaints. This shall also help banks/WLAOs to stay away from payment of damages to clients for late credit for unsuccessful ATM transactions
- Currently, ATMs are mostly seen as a channel for supplying cash while it can be leveraged for numerous other purposes. More than 900 Mn monthly transactions on ATMs clearly places the strong clients approval of ATMs across various regions and town classes. With the aid of advanced technology, ATMs can be used for added banking services selectively and can increase clients experience.

### Conclusion

The purpose of research is to obtain evidence that there is a relationship between implementation of Green Banking Techniques and Operational Cost of Banks. Green Banking is the newest delivery channel of Banking Services. The results of the research show that the policies carried out are only limited to the use of the paperless program or paper savings in the company's operational activities. One needs to gain knowledge about the benefits and the overall process.

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